

### REMARKS

Reconsideration of this application in view of the above amendments and following remarks is respectfully requested. Claims 1-11 are now pending. Claims 1-3 have been amended. Claims 12-15 have been canceled.

#### ***Response to Restriction Requirement***

Applicants have canceled withdrawn claims 12-15, subject to their continued prosecution in a corresponding divisional application.

#### ***Double Patenting***

Claims 1-11 stand provisionally rejected on the grounds of obviousness-type double patenting as unpatentable over claims 1-7 of copending U.S. Application No. 10/540,406. Since this is only a provisional rejection, Applicants wish to postpone responding to the same until such time that the rejection is no longer of a provisional nature.

#### ***Information Disclosure Statement***

Applicants have not been able to identify a specific publication date for reference number 59. However, it is Applicants' understanding that this reference was publicly available before the priority filing date of this application, and thus constitutes prior art to the same. Accordingly, Applicants request that this publication simply be designated as "2002", which date should be understood to be prior to the August and December 2002 priority filing dates of this application.

#### ***Claim Rejections Under 35 U.S.C. §112, Second Paragraph***

Claims 1, 2 and 4-11 stand rejected under the second paragraph of §112 as indefinite for lacking antecedent support with regard to the phrase "the deaminated solid phase". For purpose of clarity only, Applicants have amended claims 1, 2 and 3 to recite a process step yielding a deaminated solid phase bound nucleic acid. Applicants also added the word "deaminated" to claim 3 for consistency (*i.e.*, optionally washing the deaminated solid phase

bound nucleic acid). Thus, proper antecedent basis is clearly set forth in the rejected claims for the phrase noted by the Examiner, and Applicants request that this ground of rejection be withdrawn.

***Claim Rejections Under 35 U.S.C. §102(b)***

Claim 1 stands rejected under §102(b) as anticipated by Olek *et al.*, *Nucleic Acids Research*, **24**(24):5064-66, 1996 (Olek) for the reasons set forth on pages 4-5 of the Office Action. Applicants respectfully disagree.

Olek fails to teach the recited step of “binding the nucleic acid to a solid phase”. Instead, Olek utilizes low melting point (LMP) agarose beads into which are embedded either (a) denatured DNA or (b) cells of which DNA is to be analyzed. Such a procedure does not constitute “binding” of nucleic acid to a solid support, since the DNA of Olek simply “floats” in the agarose gel. Further, the procedure of Olek does not utilize a “solid support”, since the agarose beads are, in reality, just a small pearl of agarose gel surrounded by mineral oil. A spherical gel bead containing DNA floating therein does not constitute “binding the nucleic acid to a solid phase” as that phrase is used and defined in the specification (*see, e.g.*, specification beginning at page 6, line 4).

In addition, claims 2-3 stand rejected under §102(b) as anticipated by Herman *et al.*, *Proc. Natl. Acad. Sci. USA*, **93**:9821-26, 1996 (Herman) for the reasons set forth in the Office Action at page 5. Again, Applicants respectfully disagree.

The only mention that Applicants can find with regard to binding DNA to a solid support is on page 9822, under the heading “*Bisulfite Modification*”, and the sentence that reads: “Modified DNA was purified using the Wizard DNA purification resin according to the manufacturer (Promega) and eluted into 50 µl water.” Rejected claims 2 and 3 require that the nucleic acid be bound to a solid support not only for purification, but also for subsequent incubation and other steps. While Herman may have isolated DNA using a solid support, this does not in any way teach the prolonged attachment recited in claims 2 and 3.

Accordingly, Applicants submit that the rejected claims are novel over the cited references, and request that ground of rejection be withdrawn.

***Claim Rejections Under 35 U.S.C. §103(a)***

Claims 4-11 stand rejected under §103(a) as obvious over Olek or Herman as applied above, and further in view of published PCT WO 01/37291 to Weindel *et al.* (Weindel). Applicants respectfully disagree for the reasons noted below.

Neither Olek nor Herman teach all the recited elements of claims 1-3, specifically with regard to binding the nucleic acid to a solid phase, and retaining such attachment for subsequent steps. Furthermore, Olek or Herman, taken alone or in any combination, does not suggest the claimed subject matter, or motivate one skilled in the art to arrive at the same. Olek does not even teach binding nucleic acid to a solid support. Herman, on the other hand, merely discloses a conventional solid support purification step, and in no way teaches or suggests the binding of nucleic acid to a solid support for a period of time that would include all the various steps recited in independent claims 1-3.

The addition of Weindel does not cure the deficiencies of Olek and Herman. Weindel is directed to magnetic glass particles, and does not teach or suggest the various steps recited in claims 1-3. Any number of references can be cited for disclosing solid phases that can be used in the practice of this invention. What the cited references lack, however, is any teaching or suggestion of the steps specifically recited in claims 1-3. Similarly, as for dependent claims 4-11, since they depend directly or indirectly from claims 1-3, the dependent claims are patentable over the cited references for the very same reasons.

Accordingly, Applicants submit that the cited references, taken alone or in any combination, do not teach or suggest the claimed subject matter, and request that this ground of rejection be withdrawn.

***Conclusion***


The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Application No. 10/647,720  
Reply to Office Action dated June 13, 2006

A good faith effort has been made to place this application in condition for allowance. However, should any further issue require attention prior to allowance, the Examiner is requested to contact the undersigned at (206) 622-4900 to resolve the same.

Respectfully submitted,

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